

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A system for parsing an arbitrary input stream, comprising:

a plurality of parsers operable to parse ~~an a telecommunication data~~ input stream, each parser corresponding to a unique ~~set of grammar rules~~~~input structure~~;

a parser selection agent operable to receive the input stream and select a subset of the plurality of parsers to parse the input stream, wherein the input stream comprises a plurality of differing input structures and wherein the selected subset of parsers produce multiple parser outputs ~~corresponding to the plurality of differing input structures~~; and

an encoding agent operable to convert the multiple parser outputs to a common grammar.

2. (Currently Amended) The system of Claim 1, wherein the multiple parser outputs correspond to differing grammars ~~and wherein the multiple parser outputs, as converted into the common grammar, are at least one of further processed and entered into a database for later processing.~~

3. (Currently Amended) The system of Claim 1, wherein the parser selection agent and plurality of parsers are configured in a factory pattern and wherein the input stream comprises a plurality of ~~telecommunication messages from a plurality of telecommunication components, each telecommunication message having a plurality of message~~ headers comprising differing types of information.

4. (Previously Presented) The system of Claim 1, wherein the parser selection agent is operable to provide to a client, in response to a parse request, at least one of a parser output and an indication when at least some of the input stream is not successfully parsed and wherein the parser selection agent, prior to selection of the subset of parsers, is not informed in advance of the source or input structure associated with the at least some of the input stream.

5. (Currently Amended) A system for parsing an arbitrary input stream, comprising:

a plurality of parsers operable to parse an input stream, each parser corresponding to a unique input structure;

a parser selection agent operable to receive the input stream and select a subset of the plurality of parsers to parse the input stream, wherein the input stream comprises a plurality of differing input structures and wherein the selected subset of parsers produce multiple parser outputs corresponding to the plurality of differing input structures, wherein the multiple parsers output different grammars; and

an encoding agent operable to convert the multiple parser outputs to a common grammar, wherein the parser selection agent is operable to provide to a client, in response to a parse request, an error message when the parser selection agent is unable to identify one of the plurality of parsers to parse at least some of the input stream and when the parser selection agent is able to identify more than one of the plurality of parsers to parse at least some of the input stream.

6. (Currently Amended) A system for parsing an arbitrary input stream, comprising:

a plurality of parsers operable to parse an input stream, each parser corresponding to a unique input structure;

a parser selection agent operable to receive the input stream and select a subset of the plurality of parsers to parse the input stream, wherein the input stream comprises a plurality of differing input structures and wherein the selected subset of parsers produce multiple parser outputs corresponding to the plurality of differing input structures and differing grammars; and

an encoding agent operable to convert the multiple parser outputs to a common grammar, wherein the input stream comprises fault information, the fault information being related to at least one of an alarm and an error, the fault information comprising first fault information related to a first event and in a first format and second fault information related to a second event discrete from the first event and in a second format different from the first format and wherein the encoding agent is operable to convert the first and second formats to a common format.

7. (Previously Presented) The system of Claim 6, wherein the first and second fault information uses different characters to refer to a same type of event and the encoding agent is further operable to convert the different characters to a common set of characters to refer to the event.

8. (Currently Amended) A method for parsing an arbitrary input stream, comprising:

(a) receiving, from a telecommunication device, an input stream, the input stream comprising information defined by at least first and second input structures;

(b) providing, by a parser selection agent and substantially simultaneously, a common portion of the input stream to each of a plurality of parsers, the plurality of parsers corresponding to differing sets of grammars;

(c) receiving, by the parser selection agent, output from each of the plurality of parsers;

(d) based on the plurality of outputs of the plurality of parsers:

(i) in a first mode selecting, by the parser selection agent, a first output from a first parser that corresponds to the first input structure and a second output from a second parser that corresponds to the second input structure; and

(ii) in a second mode, selecting, by the parser selection agent, a first parser corresponding to the first input structure to parse one or more first segments of the input stream and a second parser corresponding to the second input structure to parse one or more second segments of the input stream; and

(e) converting a first parser output from the plurality of parsers into a second parser output corresponding to a common grammar..

9. (Currently Amended) The method of Claim 8, wherein the first mode substep (d)(i) is performed.

10. (Currently Amended) The method of Claim 8, wherein the second mode substep (d)(ii) is performed.

11. (Previously Presented) The method of Claim 8, wherein the input stream comprises a plurality of nonstandardized headers.

12. (Previously Presented) The method of Claim 8, wherein the input stream is free of an embedded tag indicating a source and/or input structure associated with the input stream and wherein step (b) comprises:

identifying one or more tokens in the input stream; and
based on the identified one or more tokens, selecting the at least one of a plurality of parsers.

13. (Previously Presented) A method for parsing an arbitrary input stream, comprising:

(a) receiving an input stream, the input stream comprising information defined by at least first and second input structures;

(b) providing, substantially simultaneously, a common portion of the input stream to each of a plurality of parsers, the plurality of parsers corresponding to differing sets of grammars, wherein step (b) comprises:

determining for each of the at least one of a plurality of parsers whether a match or a no match condition exists, a match condition indicating that a selected parser has successfully parsed a selected segment of the input stream and a no match condition indicating that the selected parser has not successfully parsed the selected segment of the input stream; and

applying the following rules:

when, for a parsed segment, only one match condition is found to exist, not generating an error message;

when, for a parsed segment, a match condition is not found to exist, generating an error message; and

when, for a parsed segment, multiple match conditions are found to exist, generating an error message;

(c) receiving output from each of the plurality of parsers; and

(d) based on the outputs of the plurality of parsers, performing at least one of:

(i) selecting a first output from a first parser that corresponds to the first input structure and a second output from a second parser that corresponds to the second input structure; and

(ii) selecting a first parser corresponding to the first input structure to parse one or more first segments of the input stream and a second parser corresponding to the second input structure to parse one or more second segments of the input stream.

14. (Original) The method of Claim 9, wherein a third parser successfully parses a first portion of the input stream to form a third output and the first parser successfully parses the first portion of the input stream to form a first output and further comprising:

determining which of the first and third outputs most likely corresponds to the first portion.

15. (Previously Presented) The method of Claim 14, wherein the determining step is performed using a least squares fit analysis and wherein step (d) is performed using a declarative programming rather than procedural programming approach.

16. (Original) The method of Claim 8, wherein the first parser produces a first output and the first output is a parse tree and further comprising:

recursively evaluating at least some of the nodes in the parse tree to identify nodes requiring additional parsing.

17. (Original) The method of Claim 8, wherein the first parser produces a first output and the first output is a parse tree and further comprising:

recursively examining at least some of the nodes in the parse tree to identify nodes of interest to a client.

18. (Original) The method of Claim 8, wherein the first parser produces a first output and the first output is a parse tree and wherein at least first and second nodes of the parse tree have differing formats and further comprising:

iteratively traversing a plurality of the nodes of the parse tree to locate nodes of interest, the nodes of interest comprising the first and second nodes; and

converting each of the located nodes of interest to a standard format.

19. (Original) The method of Claim 18, wherein each of the first and second nodes use different characters to refer to a same type of event and further comprising:

converting the characters in the first and second nodes to a common set of characters to refer to the type of event.

20. (Original) The method of Claim 8, wherein each of the plurality of parsers corresponds to a unique set of tokens and grammar rules.

21. (Original) The method of Claim 8, wherein each of the plurality of parsers corresponds to a unique set of attribute grammars.

22. (Previously Presented) A computer readable medium containing processor executable instructions, wherein a processor executing the instructions performs the steps of Claim 8.

23. (Currently Amended) A method for parsing computer generated information, comprising:

receiving a stream of information, the stream being generated by one of a plurality of possible different telecommunication components, wherein each telecommunication component generates a stream corresponding to a unique input structure and wherein each of a plurality of differently structured segments of the stream is free of an embedded tag indicating a corresponding telecommunication component and/or input structure for the respective segment;

comparing, by a heuristic parser, at least a portion of the stream with multiple different sets of tokens to provide a subset of tokens identified in the at least a portion of the stream, each set of tokens corresponding to a unique input structure;

based on the subset of tokens, heuristically identifying, by the heuristic parser and from among at least one of a plurality of possible input structures and a plurality of possible telecommunication components, at least one of an input structure corresponding to the at least a portion of the stream and a telecommunication component for the at least a portion of the stream; and

thereafter parsing the stream based on the identified at least one of an input structure and telecommunication component.

24. (Previously Presented) The method of Claim 23, wherein the input stream comprises a plurality of headers, wherein the headers comprise differing types of information, wherein each of the tokens has a corresponding method expressing a set of syntactical and/or semantical relationships relating to the respective token and wherein the heuristically identifying step comprises:

for each token in the subset of tokens, invoking a corresponding method.

25. (Previously Presented) The method of Claim 24, wherein the comparing and heuristically identifying steps are performed using a declarative programming approach rather than a procedural programming approach, wherein the headers are nonstandardized, and wherein the invoking step comprises

setting, by an invoked method, a set of flags depending on the presence or absence of a syntactical and/or semantical relationship; and

wherein the values of the flags are used to heuristically identify the at least one of an input structure corresponding to the at least a portion of the stream and a telecommunication component for the at least a portion of the stream.

26. (Currently Amended) The method of Claim 23, wherein the stream of information comprises graphical information, wherein the comparing, heuristically identifying, and parsing steps are performed by a parser, wherein the parser is not provided with a flag external to the input stream to identify or assist in the identification of the at least one of an input structure corresponding to the at least a portion of the stream and a telecommunication component for the at least a portion of the stream.

27. (Previously Presented) A computer readable medium containing processor executable instructions, wherein, when the instructions are executed by a processor, the processor performs the steps of Claim 23.

28. (Currently Amended) An autonomous heuristic parser, comprising:
an input operable to receive a stream of information, the stream being generated by one of a plurality of possible different telecommunication components, wherein each telecommunication component generates a stream corresponding to a unique input structure; and

a parser operable to (a) compare at least a portion of the stream with multiple different tokens to provide a subset of tokens identified in the at least a portion of the stream, each token corresponding to a unique input structure; (b) based on the subset of tokens, identify, from among at least one of a plurality of possible input structures and a plurality of possible telecommunication components, at least one of an input structure corresponding to the at least a portion of the stream and a telecommunication component for the at least a portion of the stream; and (c) parse the stream based on the identified at least one of an input structure and telecommunication component, wherein the parser is

not provided with an input structure identifier, other than the corresponding input structure itself, either in or external to the at least a portion of the input stream to identify or assist in the identification of the at least one of the respective input structure corresponding to the at least a portion of the stream and a telecommunication component for the at least a portion of the stream.

29. (Original) The parser of Claim 28, wherein each of the tokens has a corresponding parser expressing a set of syntactical and/or semantical relationships relating to the respective token and wherein the parser is further operable, for each token in the subset of tokens, to (d) to invoke a corresponding method.

30. (Previously Presented) The parser of Claim 29, wherein the parser is further operable to (e) assign, by an invoked method, a set of flags with a corresponding set of values depending on the presence or absence of a syntactical and/or semantical relationship, wherein the values of the flags are used to heuristically identify the at least one of an input structure corresponding to the at least a portion of the stream and a telecommunication component for the at least a portion of the stream.

31. (Currently Amended) The parser of Claim 28, wherein the stream of information comprises graphical information, wherein the parser is not provided, by another telecommunication component, with a flag external to the input stream to identify or assist in the identification of the at least one of an input structure corresponding to the at least a portion of the stream and a telecommunication component for the at least a portion of the stream.